



MARINE CORPS SYSTEMS COMMAND
UNITED STATES MARINE CORPS



Transportation & Distribution Information Systems (TDIS)

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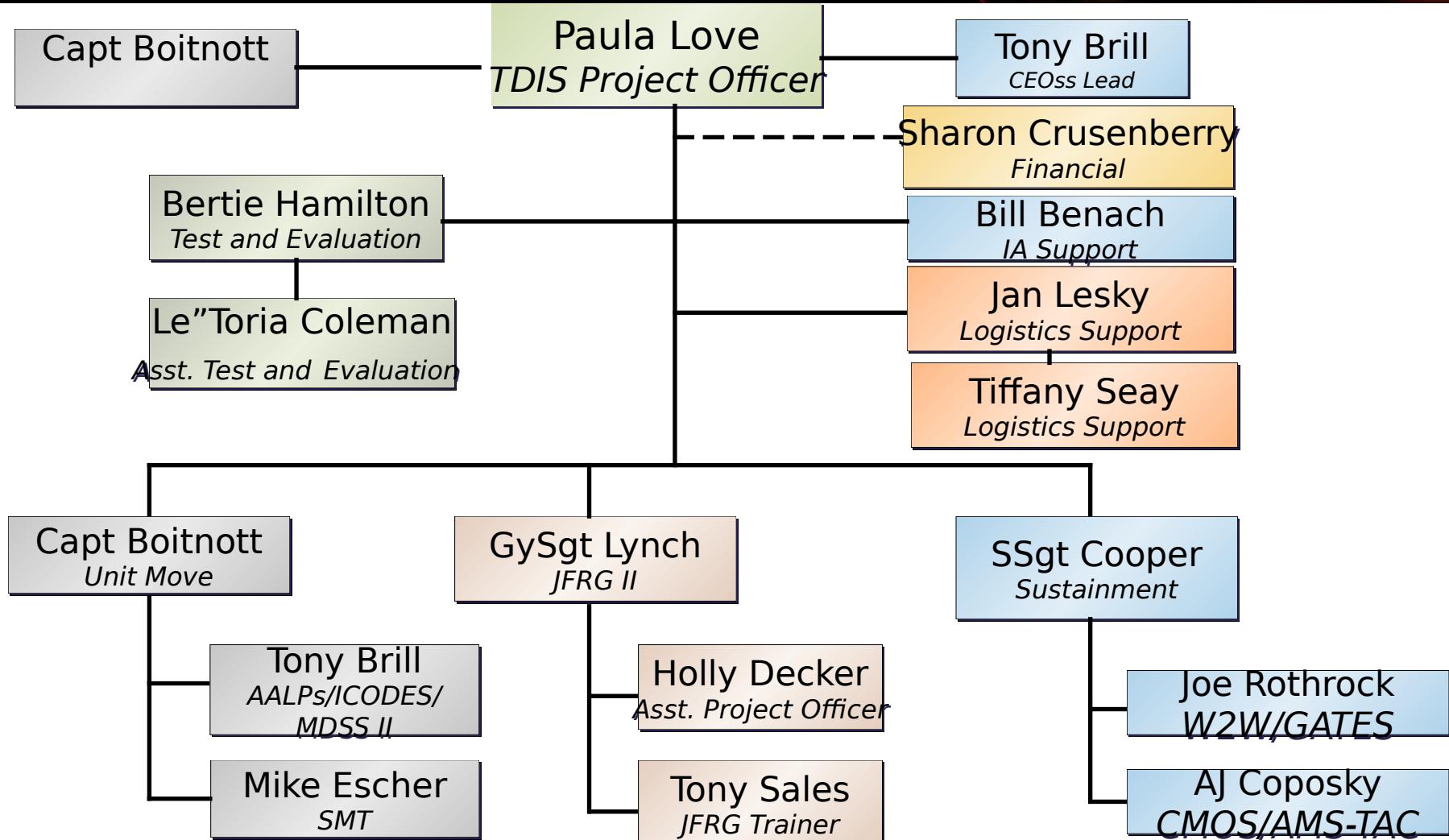
Mission

To develop, provide, and maintain integrated logistics systems that improve transportation, FDP&E, AIT, and distribution services to the Warfighter in a deployed and garrison environment, enhancing their war fighting capability.



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- ◆ **AMS-TAC - Automated Manifest System - Tactical**
- ◆ **CMOS - Cargo Movement Operations System**
- ◆ **W2W - Warehouse to War fighter**
- ◆ **Future Plans include integration of life cycle management responsibilities for:**
 - **TOPS, AGTR, GATES, Power track, GFM**
 - ◆ **Manpower and Funding Resources**



◆ AMS-TAC Current

- Fielded version 3.0.7
- Testing complete for version 3.1
 - ◆ SSAA/IA documentation in process
 - ◆ NMCI Certification pending resolution of challenges
 - Peer-to Peer or mapping is in violation of NMCI business rules
 - Using Unit budget for appropriate NMCI Seat assignment
 - Establishing seat assignments



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AMS-TAC



◆ AMS-TAC Future

- Alternatives
 - ◆ Web-enable in concert with client version (Navy/USMC venture)
 - ◆ Integration with W2W
 - ◆ Integration into CMOS
- Capabilities Based Assessment Team (CBAT) vision
- More Users MLG
- Functionality tradeoffs btw Services



CMOS

- ❖ 7.0 in IA certification process
- ❖ 7.1 certification will start upon completion of 7.0 upgrade
- ❖ Everyone should be writing RFID Tags out of CMOS for Iraq Shipments (IAW Policy)
- ❖ Working keyboard readers vice scanners
- ❖ Working 2d Barcode for 1348's
- ❖ Training 5-9 Jun, ANG, Harrisburg, PA.
 - Aug class unfunded
 - AIT Lab setup possible for mid term solution
- ❖ SPI Refresh, 55 Desk 18 Laptops
- ❖ Web-enable, USTC CBAT initiative
- ❖ D-CMOS
 - ✓ Any issues ?



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Bridge Technology

LTMITV-W2W

Last Tactical Mile In-Transit Visibility

Warehouse to



W2W Background

◆ I MEF creation

- Late Summer 2003 - SYTEX (Prime Vendor/Systems integrator)
- Deployed to Iraq

◆ II MEF transitioned deployment and refined W2W material solution and business process

◆ MARCORSYSCOM assumed program management responsibilities in Aug 05



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W2W

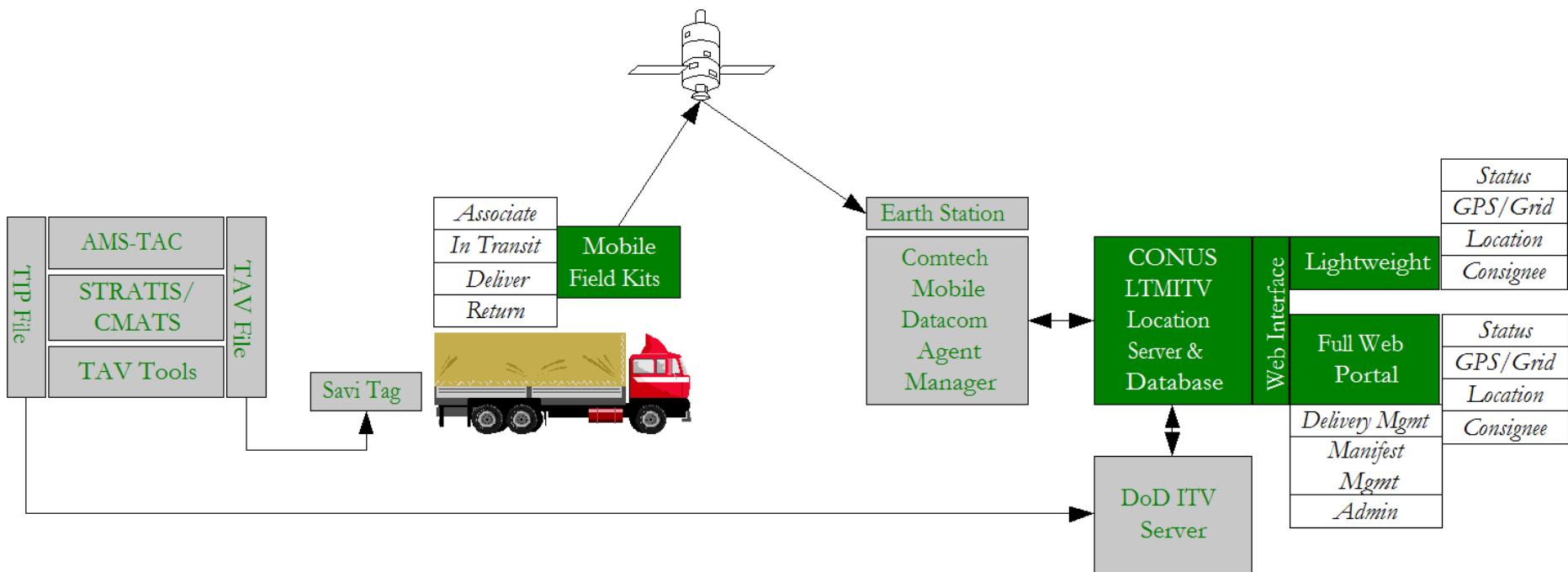
- ◆ Last-Mile' visibility of supplies forward
- ◆ Non-nodal location updates.
 - Not dependent on nodal interrogators
- ◆ Electronic capture of consignee data at delivery point
- ◆ Automated generation of AS1/AS2 transactions



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W2W





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W2W Principle Items

◆ Server

◆ Mobile Kit

- ◆ Computer (Laptop/tablet)
- ◆ Transceiver
- ◆ Cable Assembly
- ◆ Power Supply

No difference btw Base Unit Kit or Mobile Kit just how it is employed



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W2W Functional Overview

◆ Server

- Receives and parses TIP files or content level detail from ITV
- From Base Unit Kit or Mobile Kit
 - ◆ Receives location (GPS) updates
 - ◆ Receives camp drop, RUC pickup and RUC delivery data
- Provides rich query and lightweight query alternatives via web interface
- Sends AS1 and AS2 80 card column courier file updates to USMC server for consumption based on in-garrison and theatre business rules



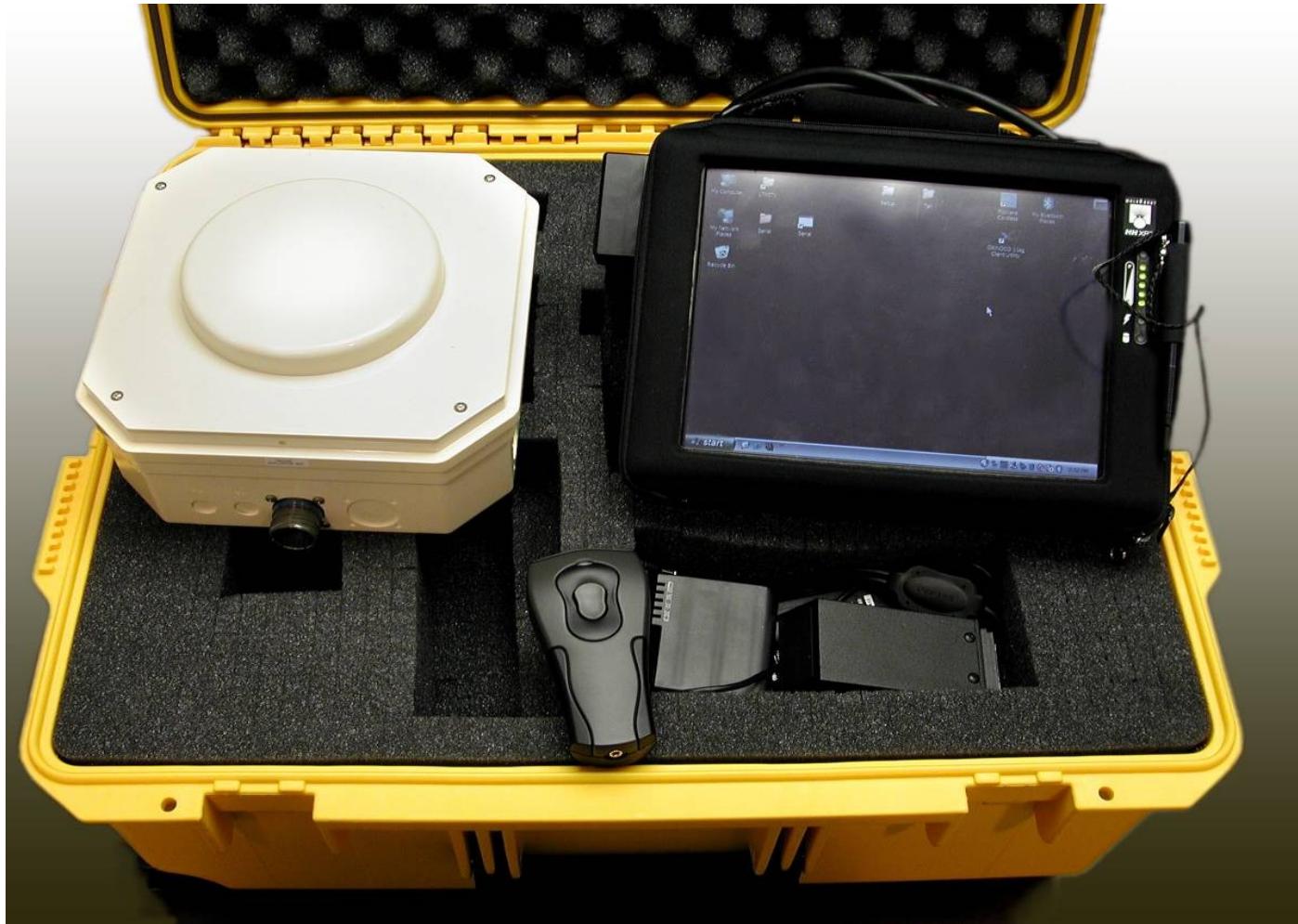
W2W Functional Overview

◆ Base Unit Kit or Mobile Unit Kit

- Computer with Visibility Tracking Program (VTP)
- At delivery preparation - input of PDC, AAC and Tag ID
- At Camp Drop, RUC Pickups and End RUC Deliveries
 - ♦ Mobile Unit Kit - GPS updates and input of Tag ID and Consignee data
 - ♦ Base Unit Kit - input of Tag ID and Consignee data



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- ◆ Visibility Tracking Program
- ◆ Software application that runs on Tablet PC, which is part of a Field Kit
 - A few touch screen, most pen-based
 - Pen-based provide brighter screens
 - Includes graphic keyboard pop-up to allow entry of name/textual data via keyboard
 - Pen-based also provides additional means of handwriting recognition for input



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W2W

VTP Main Menu

Last Tactical Mile In Transit Visibility

Warehouse to Warfighter Version 1.0.1858.24279

Status	FIELD KIT #: 99999	LOCAL TIME: 1603	ZULU TIME: 2103
	GRID: [NO FIX]	LATITUDE: [NO FIX]	LONGITUDE: [NO FIX]

System Check < Tests for VTP Readiness

Start Route < START a New Delivery Session (Prepare for your Route)

RUC Delivery < DELIVER Gear to Consignee RUC

Camp Drop < DROP Gear at Intermediate Location (NOT to Consignee)

End Route < END the Current Delivery Session

Help < Documentation and Help for the VTP

Transceiver Load



- ◆ Correlates delivery manifest data and Tag IDs with a field kit that is placed within a delivery/convoy vehicle
- ◆ Provides a means to query the location and current status of materiel pushed from SMU/TMO forward via a web enabled interface
- ◆ Can be configured 2 ways:
 - Mobile unit on each supply convoy from warehouse
 - ◆ Direct RUC delivery - AS2 (D6T)
 - ◆ Intermediate camp drop - AS1
 - Fixed system at each camp
 - ◆ Capture subsequent RUC pickup from camp - AS2 (D6T)

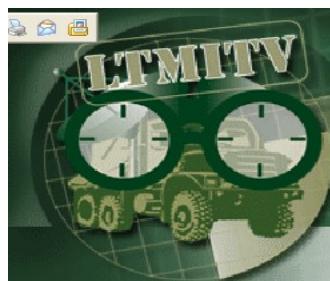


- ◆ Relies on satellite transceiver and GPS to communicate data to Location Server
 - Designed to use minimal bandwidth
 - Same transceivers as MTS and BFT
 - Provides robust seamless satellite data communications to ensure data that is sent up is not 'lost in the ether'
 - All communications between Field Kit and Satellite are encrypted
- ◆ Does not depend on a localized server
- ◆ Laptop does not use mapping software- it is purely an input/filter for data up to the Location Server



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W2W



LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Log In

Username:

Password:

Login

- [*I meant to go to the DoD ITV web site*](#)
- [*I am a Using Unit with low bandwidth but would like to query LTMITV*](#)



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W2W

LTMIV - Query - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

DoD ITV Server LTMIV Lightweight LTMIV Log Out

LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Query Manifest View Delivery Mgmt Admin

RUC TAG	TCN	Items	Status	Last Position	Last Updated
MMX200 000000	MMC10041710005XXX	13	Closed	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	2/3/2005 6:06:08 PM
Document Number	NSN		Nomenclature		UI QTY RIC
MMX20051690001	5999010321692		ACCESSORY MAINT KIT TELE		EA 00003 MC1
MMX20051690002	6625010906789		ADAPTER,TEST,POWER SUPPLY		EA 00004 MC1
MMX20051690003	5895012509557		CONVERTER,MODEM,SI		EA 00005 MC1
MMX20051690004					
MMX20051690005					
MMX20051690006					
MMX20051690007					
MMX20051690008					
MMX20051690009					
MMX20051690010					
MMX20051690011					
MMX20051690012					
MMX20051690013					

TagHistory - Microsoft Internet Explorer provided by AT&T WorldNet Service

TAG: 000004

Log Date	Position	Status
2/3/2005 6:17:37 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Closed
2/3/2005 6:17:36 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Delivered
2/3/2005 6:12:26 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Camp DropOff
2/3/2005 6:09:56 PM		In Transit
		Waiting for Details
		Pending

start C. 2 P. R. C. >> My Documents >> > 1:54 PM Thursday



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W2W

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://ltmitv.sytexinc.com/LTMITVLW/

Search Manifest DOC NUMBER: M2832143347281 NSN:
Tag ID: RUC:
TCN:

Search Reset

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

Back Search Favorites Media Go

Address http://addemo1.sytexinc.com/ltmitvlw/home.aspx

Search Manifest DOC NUMBER: M2832143347281 NSN:
Tag ID: RUC:
TCN:

RUC TAG TCN Items Status Last Position Last Updated

RUC TAG	TCN	Items	Status	Last Position	Last Updated
M28321 730764	M283214336T730764	17	Closed	33.35 N 117.41 W 61851 90164	12/2/2004 5:40:12 PM
Document Number	NSN		Nomenclature	UI	QTY RIC
M2832143347281	2540014957611		SEAL,UPPER DOOR HIN	EA	00001 MC1
M2832143347291	2930014956890		FAN OPERATOR	EA	00001 MC1
M2832143356334	5330009668657		PACKING ASSORTMENT,	EA	00001 MC1
M2832143356336	5975005709598		STRAP,TIEDOWN,ELECT	HD	00001 MC1
M2832143356338	5970004194291		TAPE,INSULATION,ELE	RO	00001 MC1
M2832143356339	5940005250907		TERMINAL KIT	KT	00001 MC1
M2832143356354	6150010270125		CABLE ASSEMBLY,SPEC	EA	00001 MC1
M2832143356355	4820013988314		VALVE,CHECK	EA	00002 MC1
M2832143356390	6240001433070		LAMP,INCANDESCENT	EA	00004 MC1
M2832143356391	6240001536494		LAMP,INCANDESCENT	EA	00004 MC1
M2832143357323	5340012658911		HANDLE,DOOR	EA	00001 MC1
M2832143357329	5340011553798		LEVER,MANUAL CONTRO	EA	00001 MC1
M2832143357330	5310009752075		NUT,PLAIN,HEXAGON	HD	00001 MC1
M2832143357331	5340009850823		CLEVIS,ROD END	EA	00001 MC1
M2832143357332	5315008423044		PIN,COTTER	HD	00001 MC1

start Camp Pendleton... 4 Internet Expl... Internet

Done

2:52 PM Monday

Lightweight Query



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Quick User Guides

Last Tactical Mile In Transit Visibility			lmtysupport@syxinc.com	Quick User Guide						
			ER GUIDE							
PREPARATION	1	Gear Up	<p>A. Check to see if you have all that you need from a field kit (see other side).</p> <p>Tablet Barcode Cables Transceiver Inverter <input type="checkbox"/> OR Portable Power</p>							
	2	Power Up	<p>B. Load field kit on the vehicle, including transceiver placement and power connections. Position the tablet PC if not done already. Click the barcode scanner to "awaken" it.</p> <p>C. At the laptop, launch firmware to connect the barcode reader, and launch the LTMIV Client Application if not up already.</p> <p>D. Run the System Check on the VTP (LTMIV Client Application). (See A other side)</p>							
	3	Capture	<p>E. If the TIP file for any of these was generated by AMS-TAC, ensure the TIP file has been sent to the LTMIV server.</p> <p>F. At the tablet PC, in the LTMIV client application, click on Start Route, Depart vehicle.</p> <p>G. Scan the Savi tag license plate barcode on the tag itself for each tagged pallet/container to be delivered. A beep indicates a successful scan. (See A other side).</p> <p>H. Press Done when you have finished scanning tag IDs and verification of tag list/count.</p> <p>I. Enter rank, name, and convoy task ID for this delivery session and press Accept.</p> <p>J. Check the screen to ensure all data is correct, then press Start, and then OK.</p>							
	4	Head Out	<p>K. Transceiver Load status bar shows the data load to be sent to LTMIV.</p> <p>L. VTP running from the tablet PC will send GPS/rid updates to LTMIV at predefined intervals while en route. Position data is at the top of the VTP screen.</p> <p>GRID: 69134 27384 LATITUDE: 87.98 N LONGITUDE: -176.00 W (See C other side)</p>							
	5	Deliver to RUC Consignee	<p>When delivering to a RUC consignee:</p> <p>M. Click RUC Delivery. Scan only the Tag ID barcode(s) of all items to be delivered.</p> <p>N. When you have returned to the VTP and the IDs have uploaded, click Done.</p> <p>O. Enter consignee data from the signed manifest. Press Accept and then OK when completed. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p>							
		OR								
	5	Camp Drop (not to consignee)	<p>L. Click Camp Drop. Scan only the Tag ID barcodes of all tagged items just delivered.</p> <p>M. When you have returned to the VTP and the IDs have uploaded, click Done.</p> <p>N. Enter the camp name and click Accept. Continue to next delivery/drop. If this was the last stop, go to #6 below.</p>							
DELIVERY	6	Reconcile	<p>Q. After the last delivery/drop, no other action on the tablet PC is required until you have returned to origin. This allows tracking the delivery asset back to its origin.</p> <p>P. Upon return to origin, click End Route. VTP will indicate if all tags have been accounted for. If so, click Done. If not, you will be asked to reconcile outstanding tags. For each tag you must indicate delivered, camp dropped or not delivered/return to origin. Indicate consignee for delivered tags, and location for camp dropped tags.</p> <p>R. Once you are finished reconciling tags, click OK. The Transceiver Load bar empties, another delivery route can be run, or the application can be closed and tablet PC shut down.</p>							
	7	RUC Pickup from Camp	<p>This step only applies to Field Kits that are configured as FIXED and situated at intermediate delivery points (not for delivery vehicles). For a RUC pickup:</p> <p>A. Press RUC Pickup. Enter consignee information and press Accept.</p> <p>B. Scan only the Tag ID barcode(s) of all items just picked up.</p> <p>C. Click Done, Click Yes, then OK.</p>							
<p>If VTP or the LTMIV Client Application closes after being launched, or during a delivery session, check the power connection to the VTP, and the USB data connection to the tablet PC.</p>										
<p>Field Kit</p>										
<p>Tablet PC Barcode Scanner</p>										
<p>Transceiver</p>										
<p>Cables & Inverter</p>										
<p>Scanned in properly. From START ROUTE, Delivery or Camp Drop screen:</p> <p>The tag IDs... After, it will acknowledge with an audible 'beep', the scanner loses connection with the tablet PC, it will return back within range (indicated by 3 quick tones), will be uploaded and added to the list of scanned tags</p> <p>Reset Scan to clear the current ITV Tag. The tag IDs list has already been uploaded on the VTP to the ITV Tag Number Field if you need to scan more barcodes.</p> <p>en keypad at the bottom left of the tablet desktop to enter or correct data.</p>										
<p>route. From the main screen:</p> <p>(E) is started and is</p> <table border="1"> <tr> <td>GRID: [OFF]</td> <td>LATITUDE: [OFF]</td> <td>LONGITUDE: [OFF]</td> </tr> <tr> <td>Grid: 69134 27384</td> <td>LATITUDE: 87.98 N</td> <td>LONGITUDE: -176.00 W</td> </tr> </table> <p>er load goes down after several minutes. ne, be patient, as the GPS and/or sufficiently locking on to a signal.</p> <p>"talk" to the transceiver, the application will close after warning the user.</p>					GRID: [OFF]	LATITUDE: [OFF]	LONGITUDE: [OFF]	Grid: 69134 27384	LATITUDE: 87.98 N	LONGITUDE: -176.00 W
GRID: [OFF]	LATITUDE: [OFF]	LONGITUDE: [OFF]								
Grid: 69134 27384	LATITUDE: 87.98 N	LONGITUDE: -176.00 W								

Version 2.0

LTMITV-W2W _____
Web Site User Guide

This guide is intended for Using Units/Consignees who wish to query for requisitioned gear which is en route along the last tactical mile! Gear that has been loaded up for delivery from a USMC garrison or tactical distribution point which has an active RFID tag associated can be queried here. **Position updates are by time interval instead of nodal-based, and consignee or intermediate drop location are provided down to the Document Number level.**

From the login page one can also navigate to the lightweight (text only) query portion of the web interface, or go directly to the DoD ITV Server. [See Site.](#)

Once logged in, you will be directed to the Query Page (below).

Clicking on the **DoD ITV Server** or **Lightweight Web Site** link at the top left will log you out of the session and send you to the respective sight within the same browser window.

These buttons are primarily for supply and distribution activities who use the system for managing delivery sessions.

In this example, **Query by RUC** is implemented. One active tag ID/manifest record is returned for the time period of the last 24 hours.

***NOTE:** Status of "Waiting for Details" is also implicitly indicated if the **RUC TAG** column only has a **TAG ID**, no **RUC**!

Clicking the **RUC/TAG Link** will open a separate window with that Tag's Location and Status History within the system.

Clicking the **Expand Button** (Down Arrow) will return a list of Document Numbers contained within the manifest.

Clicking on a Document Number will return a detailed view of that single document, including status, as well as intermediate location or consignee data, where applicable.

Clicking **BACK** will return the display to the prior screen.

Query by RUC or NSN will return all Tag IDs/Manifests associated with the queried element.

Query by Tag ID, TSN, or Document Number will return the single tag, manifest associated with that data element.

If by Document Number, the record will be **highlighted** among all items on the associated manifest.

Main URL: <http://lmitv.systexinc.com/lmitv>

This site requires a username and password. Please email LTMITV support at the above address to request a username and password. Please include your name, rank, outfit and fat 4.

If you have a username and password, enter these and click **[Login]**

Note: If your gear cannot be found, the DoD ITV server will continue to query for further updates in the distribution channel.

Username: _____
Password: _____

[Logout]

[Note!!] You will be required to re-authenticate after 20 minutes of inactivity.

LAST TACTICAL MILE IN TRANSIT VISIBILITY
Warehouse to Warfighter

Query **Manifest View** **Delivery Maps** **Address**

Search RUC/RNS NSN ECR
Manifest Data RUC Last 48 hours Status/SH

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

Limit your query results by **time interval**.

Search **RUC/RNS** **NSN** **ECR**
Manifest Data **RUC** **Last 48 hours** **Status/SH**

RUC and Tag, License Plate ID

Lead TCV for this manifest

of Document Number on Manifest

Status of Delivery

Last recorded position in last hour **Last status update, grid (LTM, WG8-24)**

Pending = Tag ID/Manifest has been identified to go on delivery, and content level detail has been received from the field or from the DoD ITV Server.

Waiting for Details = Tag ID/Manifest has been identified to go on delivery, but content level detail has yet to be received. *

In Transit = Gear is on track, convey for delivery.

Camp Destroyed = Gear has been delivered to an intermediate location and remains tagged for future delivery or for consigne pickup.

Closed = DELIVERED TO CONSIGNEE

RUC **TDN** **Row** **By**

Query

Clicking the **Query** button at the top of the page will return the results will clear any existing query results and reset the page.

Lightweight URL: <http://lmitv.systexinc.com/lmitvlw>

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

WebSite/Query

Notes: **RUC** **NSN** **ECR**
Manifest Data **RUC** **Last 48 hours** **Status/SH**

Manifest **RUC** **Manifest** **U** **QTY** **PS** **LIN** **Shipment Order** **Print** **Details**
Document **Document** **Document** **U** **QTY** **PS** **LIN** **Shipment Order** **Print** **Details**

Show previous information **Print** **Details**

Show status, location, date/time of most recent status (GMT) and consigne, if applicable.



Next Steps

- ◆ Continue to assess operational use
- ◆ Continue in-theatre fielding and assessment
- ◆ Field Kits to all 3 MEF's for Training Base
- ◆ Determine additional requirements
- ◆ Conduct Requirements Board for seamless distribution process (AMS/W2W ?)
- ◆ Future minor releases
- ◆ Passive RFID options
- ◆ Smaller footprint (Handheld)
- ◆ Converge with other SatCom providers
- ◆ MCEITS, IA Process



What it all Means

- ❖ Visibility from Warehouse to Warfighter
- ❖ Robust COTS platform
- ❖ Simplified approach
 - Uses pre-positioned data
 - Economic use of bandwidth
- ❖ Not intended as another stovepipe
- ❖ Reusable platform to solve real problems right now...
 - ❖ ...while recognizing that change is inevitable with:
 - Increased use and feedback
 - Technology trends and adoption
 - Standards, policy and directive evolution



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Questi

Transportation and Distribution
Information Systems
(TDIS)
Program Office

*Thank
You!*